ABSTRACT OF THE DISCLOSURE

A process for manufacturing a semiconductor device comprising the steps of: forming a transparent film on a semiconductor substrate including a photoelectric conversion section, the transparent film having a concave portion above the photoelectric conversion section; forming a material film on the transparent film, the material film being made of a photosensitive material having a refractive index higher than that of the transparent film; and irradiating selectively a predetermined portion of the material film with rays, and then developing the material film, whereby forming an intralayer lens having a convex portion facing into the concave portion.